

the housing. The cable retainer can be received in the cable opening of the housing to receive the cable. At least one retaining arm extends into the cable passage of the cable retainer to grip the outer surface of the cable to prevent removal of the cable. A first end of the cable retainer has outwardly extending tabs captured between the side wall of the electrical box and the housing of the cable connector to retain the cable retainer within the housing.

[0017] A further feature of the invention is to provide a cable retainer having a housing with a cable opening and a collar extending from the housing around the cable opening. An annular coil spring is received in the passage of the collar. A cable is inserted through the collar and a central opening of the annular spring. The spring engages the outer surface of the cable in the recess or valley between the adjacent corrugations and wedges between the collar and the cable to prevent removal of the cable.

[0018] Another feature of the invention provides a cable connector having a housing with a top wall having a slot. A cable retainer is received in the slot and slides between a retracted position and an inward position to grip the cable received in a passage of the housing. The cable retainer has a central opening for the cable defined by two spaced apart arms. The cable retainer is pushed downward where the arms slide around the cable so that the arms grip the outer surface and retain the cable in place.

[0019] These and other aspects of the invention are basically attained by providing a cable connector for coupling a cable to an electrical box. The cable connector includes wall with a cable opening forming a cable passage. The wall is configured for coupling to an electrical box. A cable retainer is received in the opening in the wall. The cable retainer has a body with a cable passage for receiving the electrical cable. The cable retainer is configured for gripping an outer surface of the cable and retaining the cable within the cable passage of the cable retainer. In one embodiment, the connector has front wall, a rear wall and a connecting wall extending between the front wall and the rear wall.

[0020] The various features and advantages of the invention are further attained by providing an electrical box assembly comprising an electrical box having a rear wall and a side wall where the side wall has at least one cable opening with a dimension for receiving a cable. A cable connector is coupled to the electrical box for coupling an electrical cable to the electrical box. The cable connector comprises a front wall with a cable opening forming a cable passage for receiving the cable. The wall is coupled to the electrical box where the cable opening in the wall is aligned with the cable opening in the electrical box. A cable retainer is received in the passage. The cable retainer has a body with an axial passage for receiving the electrical cable. The body has at least one retaining arm oriented for gripping an outer surface of the cable.

[0021] The features of the invention are further attained by providing a cable retainer comprising a housing having a front wall with an opening defining a cable passage extending through the front wall. A cable retainer is coupled to the housing and has a cable passage aligned with the cable passage of the housing. The cable retainer has at least spring biased arm extending into the cable passage of the cable retainer for gripping and securing the cable

[0022] The features of the invention will become apparent from the following detailed description of the invention and the annexed drawings which disclose various embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0023] The following is a brief description of the drawings in which:

[0024] FIG. 1 is a perspective view of the electrical box and cable connector in a first embodiment of the invention;

[0025] FIG. 2 is a partial enlarged view of the cable connector;

[0026] FIG. 3 is a cross-sectional side view of the cable connector and electrical box;

[0027] FIG. 4 is an exploded view of the cable connector;

[0028] FIG. 5 is a front perspective view of the cable connector;

[0029] FIG. 6 is a rear perspective view of the cable connector;

[0030] FIG. 7 is a front view of the cable connector;

[0031] FIG. 8 is a rear view of the cable connector;

[0032] FIG. 9 is a front perspective view of the housing of the cable connector;

[0033] FIG. 10 is a rear perspective view of the housing of the cable connector;

[0034] FIG. 11 is a side view of the housing of the cable connector;

[0035] FIG. 12 is a front perspective view of the cable retainer of the cable connector;

[0036] FIG. 13 is a rear perspective view of the cable retainer;

[0037] FIG. 14 is a bottom view of the cable retainer;

[0038] FIG. 15 is a side view of the cable retainer;

[0039] FIG. 16 is a front end view of the cable retainer;

[0040] FIG. 17 is a top view of the cable retainer;

[0041] FIG. 18 is a perspective view of the electrical box and cable connector in a second embodiment of the invention;

[0042] FIG. 19 is an enlarged partial view of the cable connector;

[0043] FIG. 20 is a bottom view of the electrical box showing the cable connector coupled to the electrical box;

[0044] FIG. 21 is an enlarged view of the connection of the cable connector and electrical box;

[0045] FIG. 22 is an exploded view of the cable connector;

[0046] FIG. 23 is a perspective view of the cable connector;

[0047] FIG. 24 is a front perspective view of the cable connector;

[0048] FIG. 25 is a rear view of the cable connector;

[0049] FIG. 26 is a front view of the cable connector;

[0050] FIG. 27 is a perspective view of another embodiment of the invention;

[0051] FIG. 28 is a top view of the electrical box in the embodiment of FIG. 27;

[0052] FIG. 29 is cross sectional view taken along line 29-29 of FIG. 28;

[0053] FIG. 30 is a perspective view of the cable connector in a further embodiment of the invention;

[0054] FIG. 31 is a cross sectional side view of the cable connector of FIG. 30;

[0055] FIG. 32 is a perspective view of a further embodiment of the cable connector;